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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/646,950	12/08/2000	Colin Watts	ERP01.004A	2538

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KNOBBE MARTENS OLSON & BEAR LLP
2040 MAIN STREET
FOURTEENTH FLOOR
IRVINE, CA 92614

EXAMINER	
VANDERVEGT, FRANCOIS P	
ART UNIT	**PAPER NUMBER**
1644	

NOTIFICATION DATE	DELIVERY MODE
07/31/2007	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

jcartee@kmob.com
eOAPilot@kmob.com

Office Action Summary	Application No.	Applicant(s)	
	09/646,950	WATTS, COLIN	
	Examiner	Art Unit	
	F. Pierre VanderVegt	1644	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *08 December 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-4,12-16,18-20,38-42,52-54 and 56-70* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *52-54,56 and 61* is/are allowed.

6)☒ Claim(s) *1-4,12-16,18-20,38-42,57-60 and 62-70* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

This application is a rule 371 continuation of PCT Serial Number PCT/GB99/00963.

Claims 5-11, 17, 21-37, 43-51 and 55 have been canceled.

New claims 69 and 70 have been added.

Claims 1-4, 12-16, 18-20, 38-42, 52-54 and 56-70 are currently pending and are the subject of examination in the present Office Action.

In view of Applicant's amendments filed December 8, 2006 no outstanding ground of rejection is maintained.

The following represent NEW GROUNDS of rejection and necessitate that this Office Action be made NON-FINAL.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

1. Claims 1-4, 12-16, 18-20, 38-42, 57-60 and 62-70 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter that was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The claims are drawn to a method of treating a subject with a compound that inhibits asparaginyl endopeptidase in order to inhibit or suppress an immune response or an autoimmune disease. The claimed invention is not described in the specification in a manner that Applicant was actually in possession of the claimed invention.

In regard to the claimed method of using competitive or non-competitive inhibitors of asparaginyl endopeptidase the specification is purely speculative of the use of the inhibitors based upon in vitro observations. Paragraph [0092] of the instant specification recites:

> "AEP is **believed to be involved in processing of protein antigens** which are destined to be loaded into and presented by Class II MHC molecules. In a preferred embodiment of the invention the patient to be treated has or is at risk of a disease which involves MHC Class II molecules. Although we are not bound by any theory concerning the invention, **we believe that AEP may play an important role in autoimmune disease because it may recognise and**

> **cleave at sites which are normally hidden** by glycosylation at asparagine residues. Glycosylation at asparagine residues is common in mammalian proteins and glycosylated asparagine residues are not cleaved by AEP. An abnormal reduction in asparagine glycosylation of a self protein may lead to it being susceptible to AEP cleavage at these cryptic sites and, therefore, the peptide produced from the abnormally glycosylated protein may be susceptible to loading into and presentation to the immune system by Class II MHC molecules. Bacterial proteins, such as tetanus toxin, are typically not asparagine glycosylated and so, if they contain appropriate asparagine residues, are susceptible to degradation by AEP and presentation on Class II MHC molecules in any case." (emphases added for clarity)

Accordingly, the specification does not convey that there is any knowledge as to what the role of asparaginyl endopeptidase is in the immune response. There are no in vivo working examples showing that inhibitors of asparaginyl endopeptidase can have any effect upon an immune response in vivo. The sole working example (Example 1) that shows the effect of asparaginyl endopeptidase inhibitors upon cells discloses only that the inhibitors partially block tetanus toxoid processing in vitro (Figure 7 for example). While working examples are not necessarily required in a patent application, the specification must provide a reasonable expectation that Applicant was in possession of the claimed invention. The claimed method of treatment is merely centered on "reach-through" claims based upon an observation that asparaginyl endopeptidase inhibitors inhibit progression of tetanus toxoid processing (Example 1) and that asparaginyl endopeptidase can cleave invariant chain outside of the CLIP fragment. There is not, however, any positive relationship between this ability to cleave invariant chain and the ability of an asparaginyl endopeptidase inhibitor to inhibit the removal of invariant chain from MHC class II, thereby inhibiting antigen presentation and an immune response. The specification does not disclose any positive relationship between asparaginyl endopeptidase inhibitors and their ability to inhibit class II presentation of antigen to T cells in a subject, only speculation that it may be so because Applicant has observed that asparaginyl endopeptidase inhibitors inhibit the cleavage of tetanus toxoid and that asparaginyl endopeptidase can cleave invariant chain. In Brenner v. Manson, 383 U.S. 519, 535-36, 148 USPQ 689, 696 (1966), the Court noted that "a patent is not a hunting license. It is not a reward for the search, but compensation for its successful conclusion."

Conclusion

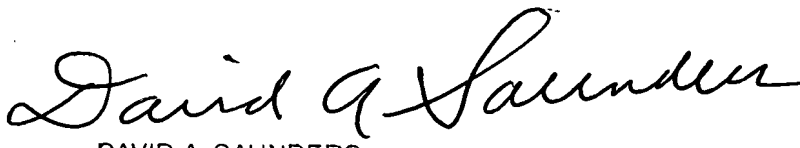
2. Claims 52-54, 56and 61 are allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to F. Pierre VanderVegt whose telephone number is (571) 272-0852. The examiner can normally be reached on M-Th 6:30-4:00 and Alternate Fridays 6:30-3:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christina Chan can be reached on (571) 272-0841. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

F. Pierre VanderVegt, Ph.D. /PV/
Patent Examiner
July 23, 2007



DAVID A. SAUNDERS
PRIMARY EXAMINER